

Date: Fri, 31 Dec 93 04:30:35 PST  
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>  
Errors-To: Ham-Space-Errors@UCSD.Edu  
Reply-To: Ham-Space@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Space Digest V93 #128  
To: Ham-Space

Ham-Space Digest                      Fri, 31 Dec 93                      Volume 93 : Issue 128

Today's Topics:

                    Help working ROMIR-1  
Post your Sat-Track software pick here  
Two-Line Orbital Element Set Format

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>  
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: 31 Dec 1993 01:22:57 GMT  
From: swrinde!cs.utexas.edu!howland.reston.ans.net!vixen.cso.uiuc.edu!  
moe.ksu.ksu.edu!crcnis1.unl.edu!unlinfo.unl.edu!djw@network.ucsd.edu  
Subject: Help working ROMIR-1  
To: ham-space@ucsd.edu

I need some help with the procedure for working ROMIR. I can hear the  
bird just fine, in fact, I sort of worked it by default when it sent me  
back a "busy" and disconnected my tnc. My questions are these.....

1. How do you connect to the ROMIR-1 machine? Luck? I don't  
want to tie up the frequency with a lot of useless tries and  
"busy's".

2. Once connected, what commands do you send for a quick and  
efficient QSO?

If all this stuff is in a FAQ, please direct me there!!!

Thank You, 73- Dan  
djw@unlinfo.unl.edu

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Date: 30 Dec 93 13:07:44  
From: idacrd.ccr-p.ida.org!idacrd!n4hy@uunet.uu.net  
Subject: Post your Sat-Track software pick here  
To: ham-space@ucsd.edu

Quiktrak and Instantrak are both still available from AMSAT. Quiktrak is a little old and Instantrak and it both use EGA. There is a need for a new one. I have one in the works that I will not say much about at present. It will support ONLY modern facilities. Sorry to those of you who have 80286's and before but the utilities needed to support the older stuff costs space, money, and time that is just not available if you also wish to 'keep up.'

I would say that Instantrak and Quiktrak are very complimentary set of tools but if I had to pick ONE, I would pick Instantrak. Quiktrak does things Instantrak does NOT do and vice versa. If you want contact Keith Pugh, W5IU and get an unbiased opinion, and a list of the capabilities which distinguishes them.

Bob

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Robert W. McGwier | n4hy@ccr-p.ida.org Interests: ham radio,  
Center for Communications Research | scouts, astronomy, golf (o yea, & math!)  
Princeton, N.J. 08520 | ASM Troop 5700, ACM Pack 53 Hightstown  
(609)-279-6240(v) (609)-924-3061(f) | I used to be a Buffalo . . . NE III-120

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Date: Thu, 30 Dec 1993 21:11:10 MST  
From: swrinde!gatech!destroyer!nntp.cs.ubc.ca!alberta!nebulus!ve6mgs!  
usenet@network.ucsd.edu  
Subject: Two-Line Orbital Element Set Format  
To: ham-space@ucsd.edu

As a service to the satellite user community, the following description of the NORAD two-line orbital element set format is uploaded to sci.space.news and rec.radio.info on a monthly basis. The most current orbital elements from the NORAD two-line element sets are carried on the Celestial BBS, (513) 427-0674, and are updated daily (when possible). Documentation and tracking software are also available on this system. The Celestial BBS may be accessed 24 hours/day at 300, 1200, 2400, 4800, or 9600 bps using 8 data bits, 1 stop bit, no parity. In addition, element sets (also updated daily) and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

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Data for each satellite consists of three lines in the following format:

AAAAAAAAAAAA

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1 NNNNNNU NNNNNAAAA NNNNN.NNNNNNNNN +.NNNNNNNNN +NNNNNN-N +NNNNNN-N N NNNNNN
2 NNNNN NNN.NNNN NNN.NNNN NNNNNNNN NNN.NNNN NNN.NNNN NN.NNNNNNNNNNNNNNNNN
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Line 0 is a eleven-character name.

Lines 1 and 2 are the standard Two-Line Orbital Element Set Format identical to that used by NORAD and NASA. The format description is:

Line 1

Column	Description
01-01	Line Number of Element Data
03-07	Satellite Number
10-11	International Designator (Last two digits of launch year)
12-14	International Designator (Launch number of the year)
15-17	International Designator (Piece of launch)
19-20	Epoch Year (Last two digits of year)
21-32	Epoch (Julian Day and fractional portion of the day)
34-43	First Time Derivative of the Mean Motion or Ballistic Coefficient (Depending on ephemeris type)
45-52	Second Time Derivative of Mean Motion (decimal point assumed; blank if N/A)
54-61	BSTAR drag term if GP4 general perturbation theory was used. Otherwise, radiation pressure coefficient. (Decimal point assumed)
63-63	Ephemeris type
65-68	Element number
69-69	Check Sum (Modulo 10) (Letters, blanks, periods, plus signs = 0; minus signs = 1)

Line 2

Column	Description
01-01	Line Number of Element Data
03-07	Satellite Number
09-16	Inclination [Degrees]
18-25	Right Ascension of the Ascending Node [Degrees]
27-33	Eccentricity (decimal point assumed)
35-42	Argument of Perigee [Degrees]
44-51	Mean Anomaly [Degrees]
53-63	Mean Motion [Revs per day]
64-68	Revolution number at epoch [Revs]
69-69	Check Sum (Modulo 10)

All other columns are blank or fixed.

Example:

NOAA 6

1 11416U 86 50.28438588 0.00000140 67960-4 0 5293  
2 11416 98.5105 69.3305 0012788 63.2828 296.9658 14.24899292346978  
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Dr TS Kelso Assistant Professor of Space Operations  
tkelso@afit.af.mil Air Force Institute of Technology

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Date: Wed, 29 DEC 93 12:56:13 EST  
From: sgiblab!spool.mu.edu!sol.ctr.columbia.edu!news.kei.com!bloom-beacon.mit.edu!  
noc.near.net!news.delphi.com!usenet@ames.arpa  
To: ham-space@ucsd.edu

References <H.eg.MmJ9EeMZVZc@harvee.billerica.ma.us>, <kerskine.13.0@ftp.com>,  
<1993Dec28.151104.8572@mnemosyne.cs.du.edu>t  
Subject : Re: 10m rx (really 2m tx)

How about building a transmit converter right out of the ARRL handbook, and  
converting an HF rig up (or build a 10 meter transmitter to drive it)?

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Date: Fri, 31 Dec 1993 01:33:26 GMT  
From: yuma!galen@purdue.edu  
To: ham-space@ucsd.edu

References <kerskine.13.0@ftp.com>, <1993Dec28.151104.8572@mnemosyne.cs.du.edu>,  
<931229.46573.PEITZER@delphi.com>  
Subject : Re: 10m rx (really 2m tx)

In article <931229.46573.PEITZER@delphi.com> PEITZER@delphi.com writes:  
>How about building a transmit converter right out of the ARRL handbook, and  
>converting an HF rig up (or build a 10 meter transmitter to drive it)?  
You could get a Uniden HR2600 and tap in before the finals.  
I'm doing it,  
Galen, KF0YJ, DN70

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End of Ham-Space Digest V93 #128

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